

REMARKS/ARGUMENTS

Responsive to the Official Action mailed June 24, 2005, applicant has amended the claims of his application in an earnest effort to place this case in condition for allowance. Specifically, independent claims 1 and 2 have been amended, and new claims 10 and 11 added.

Reconsideration is respectfully requested.

As discussed in the Specification, the present invention contemplates a unique nonwoven fabric construct, particularly suited for barrier applications, which is formed by providing a frangible fibrous layer, comprising a first fibrous component, which is positioned in cooperation with an associated substrate layer comprising a second fibrous component and/or a unit-area film component. Thereafter, application of external energy, which is hydraulic energy, acts to fragment the first fibrous component of the frangible fibrous layer into multiple sub-fibers which, in turn, are integrated into the associated substrate layer. The resultant fabric finds utility for various barrier applications, such as medical fabrics, hygiene products, and the like.

In the Action, the Examiner has rejected the claims under 35 U.S.C. §112, objecting to the recited elastic modulus limitation of the claims. This rejection is respectfully traversed. At page 11 of applicants' specification it is explained that the present invention can be practiced such that the fibers and/or filaments of the frangible fibers and subsequent layers may be formed of the same or different compositions. However, the specification goes on to recite that the component of the frangible fibrous layer "exhibits an elastic modulus of at least 20% less than the individual fibrous or film unit/area of the substrate layer". The specification further

states "differing thermoplastic polymers can be optionally compounded with the same or different performance improvement additives".

It is respectfully submitted that this disclosure will be well-understood by those familiar with the art, and that polymer compositions can be readily selected in accordance with the specification, to provide the desired elastic modulus differential. Elastic modulus values for varying polymers, and resultant fibrous constructions, are well-known by those skilled in the art. Accordingly, it is respectfully maintained that applicants' disclosure complies with 35 U.S.C. §112, and it is respectfully submitted that this rejection should be withdrawn.

In connection with the rejection of claims 2-9 under 35 U.S.C. §112, applicant has revised claim 2. It is believed that this rejection can now be withdrawn.

Applicant has submitted a Terminal Disclaimer referencing his commonly-owned U.S. patent application Serial No. 10/819,034, and accordingly, it is believed that the Examiner's double-patenting rejection can be withdrawn.

In rejecting the pending claims under 35 U.S.C. §102, the Examiner has relied upon U.S. Patent No. 5,935,883 to Pike, and U.S. Patent No. 6,739,023, to Vonfeldt et al. However, as set forth in the pending claims, it is respectfully submitted that neither of these references teach or suggest applicant's invention, and accordingly, the Examiner's rejections are respectfully traversed.

It is first noted that the Pike reference clearly does not teach or suggest applicant's invention, wherein a frangible fibrous layer, comprising a first fibrous component, is positioned in cooperation with a substrate layer, with application of external energy to the frangible fibrous layer resulting in its fragmentation into multiple sub-fibers, which are integrated into the

substrate layer by the external energy. Rather, Pike is specifically limited in its teachings to the formation of "splittable conjugate meltblown fiber" which "spontaneously splits without mechanical agitation or fibrillation".

In particular, at column 3, lines 18 *et seq.* of Pike, this patent states:

The splittable conjugate meltblown fiber of the present invention spontaneously splits without extraneous mechanical agitation or fibrillation when the fiber is contacted with a hot aqueous split-inducing medium. Aqueous split-inducing media suitable for the invention include hot water, desirably a hot water having temperature of at least 60° C., more desirably a temperature between 65° C. and 100° C. Additionally, suitable split-inducing media are steam and mixtures of steam and air.

The Examiner references column 1 of Pike, but in essence, this portion of the reference *teaches away* from applicant's invention:

However, the hydro-needling process has not been used to produce split meltblown fiber webs since the autogenously bonded meltblown fiber webs, which have very fine breakable fibers and contain substantially uniformly distributed numerous inter-fiber bonds that restrict fiber movements, are difficult to split with the mechanical splitting process (column 1, line 61 *et seq.*).

At column 8, lines 6-16, referenced by the Examiner, Pike discusses lamination of the disclosed superfine microfiber web, but clearly *does not* contemplate splitting of frangible fibrous components, and integration into an associated substrate. Again, as noted above, Pike specifically *teaches away* from formation of a nonwoven fabric construct in this fashion.

It is believed that the Vonfeldt et al. reference is likewise deficient in teaching or suggesting the present invention. It is first noted that Vonfeldt et al., like Pike, is clearly deficient in teaching or suggesting an elastic modulus differential, as specifically set forth in

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Amendment dated October 24, 2005
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applicant's presently pending claims. Indeed, Vonfeldt et al., like Pike, *teaches away* from applicant's claimed invention. At column 6, line 30 *et seq.*, Vonfeldt et al. states:

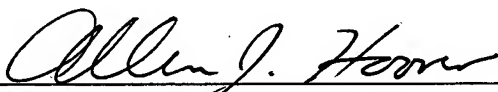
Splitting of the continuous multi-component fibers prior to the incorporation of staple fibers is an important aspect of the invention in that it allows the full energy of the jets to directly impact the splittable multi-component fibers.

Clearly, Vonfeldt et al. is teaching away from applicant's contemplated integration of the frangible fibrous component with the associated substrate attendant to fragmentation of the frangible fibrous component into sub-fibers.

In view of the foregoing, formal allowance of claims 1-11 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicant's attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

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I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **October 24, 2005**.

